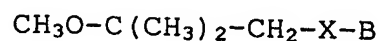


CLAIMS

1. A method of generating antibodies useful for  
assaying a sample for fuel oxygenates comprising (i)  
5 conjugating a hapten having a  $\text{CH}_3\text{O}-\text{C}(\text{CH}_3)_2-\text{CH}_2$ -moiety to a  
carrier protein to produce a conjugate; (ii) injecting  
the conjugate into an animal; (iii) harvesting antibody-  
synthesising cells from the animal; (iv) fusing the  
antibody-synthesising cells with myeloma cells to form  
10 hybridoma cells; (v) cultivating the hybridoma cells;  
(vi) screening the cultivated cells to find desired cells  
producing monoclonal antibodies capable of binding methyl  
tert-butyl ether ("MTBE"); and (vii) cultivating said  
desired cells and harvesting said monoclonal antibodies.

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2. A method according to claim 1 wherein said  
hapten is:

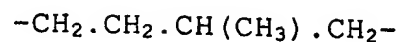


where X is a spacer and B is a group capable of  
20 binding to a carrier protein.

3. A method according to claim 2 wherein the  
spacer X comprises a hydrocarbon chain of 2-8 carbon  
atoms.

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4. A method according to claim 3 wherein the spacer X is:



5 5. A method according to claim 2, 3 or 4 wherein the binding group B is -CHO.

6. A method according to any preceding claim wherein the carrier protein is selected from bovine serum  
10 albumin, human serum albumin, rabbit thyroglobin and keyhole limpet haemocyanin.

7. A method according to any preceding claim wherein the monoclonal antibodies exhibit binding to  
15 methyl tert-butyl ether, ethyl tert-butyl ether, methyl tert-amyl ether and tert-butyl alcohol.

8. A monoclonal antibody capable of binding methyl  
20 tert-butyl ether as produced by the method of any preceding claim.

9. A method of assaying a sample for fuel oxygenates and their breakdown products comprising generating antibodies by a method according to any of

claims 1-8 and carrying out an immunoassay using said antibodies.